

AMENDMENTS TO THE CLAIMS

The following listing of claims, if entered, will replace all prior versions, and listings, of claims in the above-identified patent application.

Listing of Claims

1. (Currently Amended) A method for packet flooding in a network including a plurality of nodes, comprising:
 - generating a flood packet;
 - selecting one or more of the nodes as a like number of one or more relays to form a first relay configuration;
 - identifying a difference between the first relay configuration and a second relay configuration;
 - comparing the difference between the first relay configuration and the second relay configuration to a threshold;
 - updating the second relay configuration with the first relay configuration when the difference is above the threshold;
 - attaching a header to the flood packet, the header instructing the one or more relays to which of the nodes to send the flood packet; and
 - sending the flood packet with the attached header to the one or more relays.
2. (Original) The method of claim 1, wherein the selecting one or more of the nodes as a like number of one or more relays includes:
 - building a minimum spanning tree that covers an n-hop neighborhood of one of the nodes that generated the flood packet, and
 - using the minimum spanning tree to identify the one or more relays.
3. (Cancelled)
4. (Currently Amended) The method of claim ~~[[3]]~~ 1, wherein the attaching a header to the flood packet includes forming the header based at least in part on the first relay configuration.
5. (Currently Amended) The method of claim 1, further comprising:
 - setting a transmission power for the flood packet with the attached header based on a location of the one or more relays.

6. (Original) The method of claim 5, wherein the setting a transmission power includes determining the transmission power based at least in part on a distance to a farthest one of the one or more relays.

7. (Currently Amended) The method of claim 1, further comprising:
receiving the flood packet with the attached header at one of the one or more relays as a receiving relay;
extracting the attached header; and
retransmitting the flood packet from the receiving relay to one or more other ones of the nodes.

8. (Currently Amended) The method of claim 7, wherein the retransmitting the flood packet with the attached header includes duplicating the flood packet.

9. (Currently Amended) The method of claim 7, wherein the retransmitting the flood packet with the attached header includes: identifying one or more other nodes as one or more additional relays, and sending the flood packet with the attached header to the one or more additional relays.

10. (Currently Amended) The method of claim 1, wherein the sending the flood packet with the attached header includes: transmitting the flood packet as a unicast transmission.

11. (Currently Amended) The method of claim 1, wherein the sending the flood packet with the attached header includes: transmitting the flood packet as a broadcast transmission.

12. (Currently Amended) A system for flooding packets in a network that includes a plurality of nodes, comprising:
means for receiving a flood packet;
means for identifying one or more of the nodes as a like number of one or more relays to form a first relay configuration;
means for identifying a difference between the first relay configuration and a second relay configuration;
means for comparing the difference between the first relay configuration and the second relay configuration to a threshold;

means for updating the second relay configuration with the first relay configuration when the difference is above the threshold;

means for sending the flood packet to the one or more relays; and

means for retransmitting the flood packets from the one or more relays such that each of the nodes in the network receives one copy of the flood packet.

13. (Currently Amended) A system for flooding packets in a network that includes a plurality of nodes, comprising:

a flooding module configured to:

receive a flood packet,

select one or more of the nodes as a like number of one or more relays to form a first relay configuration,

identify a difference between the first relay configuration and a second relay configuration,

compare the difference between the first relay configuration and the second relay configuration to a threshold,

update the second relay configuration with the first relay configuration when the difference is above the threshold,

attach a header to the flood packet, the header instructing the one or more relays to which of the nodes to send the flood packet; and

a forwarding module configured to:

send the flood packet with the attached header to the one or more relays.

14. (Original) The system of claim 13, further comprising at least one of a directional antenna and an omni-directional antenna.

15. (Original) The system of claim 13, wherein the flooding module is configured to:

build a minimum spanning tree that covers an n-hop neighborhood of one of the nodes that generated the flood packet, and

identify the one or more relays based at least in part on the minimum spanning tree.

16. (Cancelled)

17. (Currently Amended) The system of claim ~~[[16]]~~ 13, wherein the header is formed based at least in part on the first relay configuration.

18. (Currently Amended) The system of claim 13, wherein the flooding module is further configured to set a transmission power for the flood packet with the attached header based on a location of the one or more relays.

19. (Original) The system of claim 18, wherein when setting a transmission power, the flooding module is configured to determine the transmission power based at least in part on a distance to a farthest one of the one or more relays.

20. (Currently Amended) The system of claim 13, wherein the forwarding module is configured to transmit the flood packet with the attached header as a unicast transmission.

21. (Currently Amended) The system of claim 13, wherein the forwarding module is configured to transmit the flood packet with the attached header as a broadcast transmission.

22. (Currently Amended) A method for ~~packet~~ flooding ~~packets~~ in a wireless ad hoc network that includes a plurality of nodes, comprising:
~~receiving~~ generating a wireless flood packet within a node in the wireless ad hoc network;
selecting one or more of the nodes as ~~a like number of~~ one or more relays to build a relay configuration;
attaching the relay configuration to the wireless flood packet as a header;
and
flooding the wireless ad hoc network with the wireless flood packet by sending the wireless flood packet with the attached header to the one or more relays in the relay configuration[[:]] and forwarding the wireless flood packet with the attached header from [[by]] the one or more relays to one or more other relays or other nodes such that each of the nodes in the wireless ad hoc network receive the flood packet.

23. (Currently Amended) A method for ~~packet~~ flooding ~~packets~~ in a wireless ad hoc network that includes a plurality of nodes, comprising:
receiving, ~~at a first one of the nodes~~, a wireless flood packet at a first node in the wireless ad hoc network;
determining whether the wireless flood packet includes an attached header, the header including a relay configuration identifying one or more second nodes to which the first node is to transmit the wireless flood packet;

extracting the relay configuration from the header when the wireless flood packet includes the header; and

flooding the wireless ad hoc network with the wireless flood packet by retransmitting the wireless flood packet to the one or more second nodes based at least in part on the extracted header such that each of the nodes in the wireless ad hoc network receive the flood packet.

24. (New) The method of claim 22, further comprising flooding the wireless ad hoc network such that each of the nodes in the wireless ad hoc network receive the flood packet once.

25. (New) The method of claim 23, further comprising flooding the wireless ad hoc network such that each of the nodes in the wireless ad hoc network receive the flood packet once.